

NOTES ON CARABIDÆ, INCLUDING A SYNOPSIS OF  
THE GENERA CYLINDROCHARIS, EUFERONIA,  
MELANIUS (OMASEUS) AND DYSIDIUS OF  
THE TRIBE PTEROSTICHINI

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*Scaphinotus* Dej.

*S. snowi* LeConte

Color uniformly violet; rather dull, not as shining as in *roeschkei* and *vandykei*. Thorax a little wider (5 mm.) than long (4 mm.); surface of disk uniformly coarsely punctured, rugous; side margins much thickened, smooth and rounded, not strongly reflexed as it is in all other species of this group; hind angles not produced, rounded at tip, sides of thorax broadly rounded, not at all sinuate at basal half, widest at the middle with one seta near margin; median line distinct; apex and base emarginate. Elytra oblong, slightly oval, about twice as long as wide; side margins faintly reflexed, a little more so towards humeri; very coarsely punctate; striae evident toward suture but indistinguishable on sides. Head black, long, narrow with a few scattered punctures along center arranged longitudinally. Mandibles piceous at tips with stiff coarse hairs on under side. Palpi black to dark, piceous on last joint. Beneath black, shining; coarsely and confluent punctured at sides, more finely and distinctly so on abdominal segments. Legs black. Hind trochanters short, rounded. Antennæ long and slender reaching to middle of body; first four joints black, smooth, remainder piceous and hairy. Length 15 mm. Width 6 mm.

The above description is drawn from a unique male taken in the White Mountains of Arizona at Diamond Creek, elevation 7,000 feet, by D. K. Duncan, June, 1926. This specimen is now in the Nicolay Collection. We are acquainted with only two other examples of this very rare and little known species. One female in the collection of the late Professor Snow, now installed in the museum collection of the University of Kansas, Lawrence, Kansas, and the single male type in the LeConte collection in the

Museum of Comparative Zoology at Cambridge, Mass. Both of these specimens came from Santa Fe Cañon, New Mexico (altitude 7,000 feet) and were taken by the Kansas University Scientific Expedition for 1880. The senior author has had the privilege of examining both. At the request of Mr. Charles Schaeffer, Mr. Benedict very kindly sent on the specimen in the collection of the museum of the University of Kansas for inspection. This female is larger, darker and with thorax slightly more reflexed and hind angles more acute than in the two males. Length  $16\frac{1}{2}$  mm. The head of the snowi in the Nicolay collection is very sparingly punctured.

This species must inhabit high altitudes, all specimens coming from an elevation of 7,000 feet.

The measurements of the type in Cambridge are \*length  $13\frac{1}{2}$ –14 mm.; \*across thorax  $4\frac{1}{2}$ –5 mm.; \*across elytra  $6\frac{1}{8}$ – $6\frac{1}{4}$  mm.

As there is some discrepancy between the type and the original description in the Transactions of the Kansas Academy of Science, 1881, we include this description: "*Cychnus (Scaphinotus) snowi*, LeConte Black, without purple tinge. Head impunctured. Prothorax densely punctured, about one third wider than long; sides thickened and reflexed, more widely towards the base which is strongly emarginate in an arc of a circle, tip also emarginate but less deeply, dorsal line well impressed, transverse impressions deep, basal impressions indistinct, lost in the concavity produced by the reflexed margin. Elytra suboval, not dilated behind, lateral margin strong, wider about the humeri which are rounded; striae 14 or 15, distinctly impressed, except the outer ones which are confused; punctures of the striae deep, distant a little more than their diameter. Flanks of prothorax not punctured; epipleurae, sides of meso- and metathorax and first ventral segments coarsely punctured. Length 9 mm.

"One male. The front tarsi have the joints 1–3 moderately dilated and spongy pubescent beneath over the whole surface as in *C. andrewsii*. This is a very singular species; the sides of the prothorax are thicker than in any other, and nearly as widely reflexed towards the base as in *C. elevatus*, though the hind

\* Measurements from front of head to elytral apices. \* Width taken at widest part.

angles are not prolonged nor is the humeral margin of the elytra as wide; the tarsi, as just stated are as in *C. andrewsii*, while the punctured prothorax distinguishes it at first sight from all the other species of the group.”

Since writing the above and as this paper goes to print several additional specimens have come to light. Nine are in the collection of the Academy of Natural Sciences of Philadelphia. These were all taken in Black Range, Sierra Co., New Mexico, by Dr. H. A. Pilsbry, while searching for snails. Also found at an elevation of about 8/9,000 feet.

Mr. Phillip Darlington of the Museum of Comparative Zoology at Cambridge writes, “I have seen here two specimens of *Scaphinotus snowi* in addition to the type. These specimens are labelled respectively 55-7,000 feet, vicinity of Durango, La Plata County, Colorado, July 23-August 8, 1885, from the F. C. Bowditch Collection in the M. C. Z., and Blue Mountains, La Sal National Park, Monticello, Utah, July 20, 1933, W. S. Creighton, in the Darlington Collection.”

#### Maronetus Casey

##### *M. schwarzi* (Beut.)

Although there is no mention made of the type or its disposition in the original description, we have located it in the collection of Colonel Casey, now installed in the United States National Museum. There is no type in the American Museum of Natural History, New York. The single specimen bears a locality label “Summit of Black Mts.” After a careful examination we find that the punctures of the elytra are not confined to the basal half but continue toward the apex exactly as they do in the type material of *hubbaridi* Schwarz, which is also in the National Museum. *Schwarzi* has the setigerous punctures the same as in *hubbaridi* and is not more robust or broader than many specimens in the series of *hubbaridi*. Therefore we have come to the conclusion that *schwarzi* is a synonym of *hubbaridi*.

The senior author has collected *hubbaridi* on the summit of Mt. Mitchell, N. C., and also on Mt. LeConte and near Mt. Guyot in Tennessee. It is found sifting leaves and moss and also on the underside of small sticks and under loose bark near the ground.

Some were taken in bottles filled with molasses mixed with a few drops of asafoetida.

**M. imperfectus** var. **tenuis** Casey

Described from a single specimen taken in the Black Mountains of North Carolina. Among the four examples in the Horn Collection in Philadelphia under the name *imperfectus* the one from Round Knob, N. C., is *tenuis*, the remainder are *imperfectus*.

*M. imperfectus* occurs in Pennsylvania (probably confined to the mountainous regions of the southwestern part of the state), Maryland and Virginia. The senior author took a nice series at Skyland, Page County, June 20, Virginia, sifting deep layers of leaves in one of the few ravines still preserved untimbered, in its natural state, with the consequent abundance of leaves, moisture and mold protected by the hemlocks which somehow escaped the axe. The specimen in the Horn Collection, marked type, is from Virginia.

Variety *tenuis* replaces the stem species in North Carolina. Like others of the genus *Maronetus* they are found in the mountains at elevations ranging from 3,000 feet up to the summit. It is doubtful if any species of this genus occur much below this elevation and certainly not farther down the mountains than 2,500 feet.

First three striae deep and heavily punctured, fourth conspicuous and punctured but not so decidedly, usually showing slight traces of fifth stria and a few punctures; thoracic margin somewhat reflexed laterally (Pa.; Md.; Va.;

..... *imperfectus*.  
First two striae deep and heavily punctured, third faint, more abbreviated and not noticeably punctured; thoracic margin not reflexed (N. C.).

var. *tenuis*.

**Bembidion** Latr.

*B. vulsum* Casey and *B. filicorne* Casey are synonyms of *B. planum* Hald. Casey did not consider that he had *planum* in his collection and described his specimens under the above two species. If he had possessed the series the author has there would undoubtedly have been more "new" names.

*B. Champlaini* Casey is a synonym of *B. fugax* LeConte.

Colonel Casey also did not recognize *fugax* as being in his collection.

*B. albidipenne* Casey and *B. petulans* Casey are the same as *B. caducum* Casey.

*B. prociduum* Casey and probably *B. simulator* Casey are the same as *B. imperitum* Casey.

*B. habile* Casey is *anguliferum* LeConte. *Anguliferum* is a very common boreal species extending from Nova Scotia and New England across the continent to British Columbia and south into California. In sphagnum bogs.

*B. umbraticum* Casey is apparently a rare and valid species lacking the carina of the hind thoracic angles.

#### A. fortis Horn Anillus Duval

Holotype and topotype from Tennessee. Other specimens in Horn collection in the Academy of Natural Sciences, Philadelphia, from "Round Knob," N. C. The holotype and a single specimen taken by the senior author at Elkmont, Tenn., are apparently immature as they are much lighter in color. Casey's *carolinae* from the Black Mountains of North Carolina is identical with all the other specimens in Horn's series and consequently this name becomes a synonym. Mature specimens are of a chestnut brown color.

#### PTEROSTICHINI

#### Cylindrocharis Casey

Head large, tumid behind the eyes, which are not prominent. Body elongate and subcylindric, shining; elytra without dorsal punctures; elytra striae regular, rather deep. The mentum tooth broad with the apex deeply sinuate medially. Mandibles striate. Abdomen impressed at apex, in the male.

We recognize two species, which are superficially similar but structurally and geographically very different.

#### KEY TO SPECIES

Hind trochanters acute at tip which is drawn out in a sharp pencil like point; thorax usually longer and larger than next species (N.C.-Ga.).

*grandiceps*.

Hind trochanters rounded at tip which is short and blunt (N.E. U.S.-Ga.).

*rostrata*.

**C. grandiceps** (Chaud.) (*rostrata*† Casey)

This is a somewhat larger species averaging 17–18 mm. in length and with a longer and wider thorax than *rostrata*. It can be readily separated from the next species by the characters given in the key and also the usually larger size although small specimens are met with, which are no larger than *rostrata*.

*Grandiceps* appears to be quite local in the south. The senior author has found it in elevations of about 2/3,000 feet at Elk-mont and Mt. Leconte in Tennessee. Also reported from North Carolina and Georgia.

**C. rostrata** (Newn.) (*sulcatula* Casey, *piceata* Casey)

Rather common from Maine through North Carolina and Tennessee. Found in New England at low elevations but apparently in the mountains of the South it occurs at heights from about 3/6,000 feet. Replaces the more local and rarer *grandiceps* at these elevations. It is interesting to observe how the excellent character separating these two species (the hind trochanters as mentioned in the key) is verified by the habits of each, for while undoubtedly the two meet and overlap the other's range, all the specimens collected by the senior author in the North East and high elevations of the south were *rostrata*, while those specimens found only in the south and in the writers' experience at low elevations (2/3,000 feet) were *grandiceps*.

*Rostrata* averages smaller (about 13–14.7 mm.). The elytra striæ are somewhat more unevenly in this species and the intervals narrower and more convex. In both species the pronotum has a distinct carina near the margin posteriorly. Occasionally specimens are found where this carina is not quite so distinct and there is the more evident appearance of the striæ being punctate. This led Colonel Casey to erect two new species which we cannot recognize. Also Casey twisted the correct locations of the species with the resulting incorrect localities as given in the Leng list.

Both species may be found throughout the year except during winter and although local cannot be considered rare.

Casey's single type of *piceata* is merely a brownish immature specimen and the three specimens of *sulcatula* are typical

*rostrata*. Casey did not even recognize *grandiceps* as being in his collection. Originally Colonel Casey considered that he had two examples of *piceata*, one from New York and one from Maine. Later he apparently regarded his Maine specimen as *sulcatula* and it is placed as such in his collection.

**Euferonia Casey**

Eyes present; mandibles without setigerous punctures. Basal three segments of the antennae glabrous. Anterior tarsi with dilated joints, regular in the male. Met-episterna notably short, never decidedly longer, and generally much shorter than wide. Dorsal punctures variable but usually two in number. Body elongata. Elytral striæ complete, deep; scutellar well developed. Thorax narrower at base than apex, coarsely margined at the sides. Angles of thorax usually obtuse, foveæ large, generally duplex. Abdomen not modified apically in the male. All our species are found in the East.

KEY TO SPECIES

- Basal impressions of thorax with a distinct tubercle; elytra sometimes with a distinct iridescent reflection ..... (1).
- Basal impressions without tubercle and never with an iridescent reflection ..... (2).
- (1) With distinct iridescent reflection. Length 17-18 mm. (S.C.)  
*iripennis* nov. sp.  
 Without iridescent reflection. Length 14-18 mm. Width 4.8-6.4 mm.  
*stygica*.  
 Smaller. Length 12-13 mm. Width 4-5 mm. (N.Eng. N.N.Y.)  
var. *vipada*.
- (2) Basal impressions not linear ..... (3).  
Basal impressions of thorax linear and deep.....*lachrymosa*.
- (3) Hind angles of thorax carinate..... (4).  
Hind angles not carinate..... (7).
- (4) Form short, elytra distinctly rounded behind middle, narrowed towards base. Length 12.5-14 mm. Width 4.5-5.5 mm. .... (5).  
Form much more elongate, subparallel. Length 14-18 mm. Width 4.8-6.5 mm. .... (6).
- (5) Basal impressions rather rugosely punctured, interval much less so; tarsi and tibiæ piceous to dark reddish. (N.H.)  
*washingtonensis* nov. sp.  
 Basal impressions and interval not or much less distinctly punctured; tarsi and usually tibiæ more reddish. (Mts. of N.C.)  
var. *rufitarsis* nov. var.

- (6) Head and thorax large, latter about 5 mm. in length and breadth.  
Length 15–18 mm. .... *coracina*.  
Head and thorax not quite so large, latter about 4.5 mm. in length and  
breadth; thorax with foveæ narrower and deeper; form more nar-  
row. Length 14–17 mm. (Mts. of Md., Ky., N.C., Tenn.).  
var. *roanica*.  
Head and thorax still smaller, latter about 4 mm. in length and breadth;  
form shorter and proportionately broader, slightly more rounded.  
Length 14–15 mm. (Wise., N. Eng., Pa.)..... var. *erebea*.
- (7) Thorax long, distinctly and rather sharply narrowed behind. Length  
16–20 mm. .... *relicta*.  
Thorax more subparallel, not distinctly narrowed behind, smaller; a  
tubercle replaces the usual carina at hind angles. Length 14.5 mm.  
*febilis*.

**E. iripennis** nov. sp.

Elongate-oval, rather robust. Black shining; elytra with iridescent reflection which is especially noticeable under artificial light. Thorax quadrate, narrowed behind, about as wide as long (5 mm.); surface smooth shining, side margins reflexed; basal impression with distinct flattened tubercle with a few distinct and scattered punctures on tubercle and basal impression; hind angles obtuse, carinate, with a single distinct seta; head smooth, large, with a distinct deep longitudinal sulcus on each side of middle commencing at the clypeal suture and extending as far back as the front of the eyes, which are conspicuous; clypeus with a seta on each side, front emarginate; labrum truncate, front with long, coarse brownish hairs; mandibles black conspicuous; antennæ and palpi piceous to dark brown, first three antennal joints smooth, remainder pubescent. Elytral striæ deep, finely punctured, more conspicuously so toward base and along scutellar striæ; intervals smooth, flat or nearly so; next to last stria with row of large conspicuous setæ; tips of elytra rounded. Femora black, tibiæ piceous, tarsi dark chestnut brown. Underside black. Metasternal and prosternal episternum, and first three ventral segments coarsely and distinctly punctured, prosternum and last three ventral segments not or very faintly punctured. Length 17–18 mm. Width 5.5–6 mm.

Described from a series of five males and three females all taken at Camden, South Carolina, June 23, by Mr. Phillip J. Darlington. Holotype ♂ and allotype ♀ in the collection of the Museum of Comparative Zoology, Cambridge, Mass. Two paratypes (♂ and ♀) in the Nicolay Collection. One paratype ♂ in the United States National Museum. Remaining paratypes in Darlington Collection.

This distinct species can be easily told from all others by the iridescent reflection of the elytra, more punctate elytral striæ



and generally larger and more robust appearance. By daylight the iridescent reflection is hardly noticeable, giving way to a velvety black sheen. *Iripennis* will undoubtedly be found in other localities when the southern states are more carefully collected over.

**E. stygica** (Say) [*bisigillatus* (Harris) *rugicollis* (Hald.), *picipes* (Newn.) *quadrifera* Casey, *proba* Casey, *ingens* Casey, *umbonata* Casey, *subæqualis* Casey].

Elongate-oval, slightly less robust than preceding. Black shining. Thorax quadrate, somewhat narrowed behind; about as wide as long (4 mm.), surface smooth, shining, side margins reflexed; basal impression with distinct more or less flattened tubercle, tubercle with a few scattered punctures; hind angles obtuse, carinate, with a single distinct seta; carinæ average longer and more distinct than in *iripennis*. Head same as in *iripennis* but somewhat smaller. Elytral striæ deep, not punctured to very vaguely so towards base; intervals smooth, flat to slightly convex. Femora black, tibiæ piceous, tarsi dark chestnut brown. Underside black, punctured as in *iripennis*. Length 14–18 mm. Width 4.8–6.4 mm.

Very common. Found from Southern Canada (Ontario), down to and including North Carolina and Louisiana, westward to Iowa and Missouri. Taken all year round under logs and stones, many specimens being often met with under the same shelter. *Stygica*, according to the senior author's observations, prefers low ground and is disinclined to ascend even smaller mountains of 1,000 feet or more. Very abundant under almost every favorable hiding place along the Potomac River near Washington.

var. **vapida** (Casey).

Much smaller than *stygica*. More convex. Tubercle of basal impression high and distinct; carinæ of hind angles longer and more distinct than in most specimens of *stygica*. Elytral striæ very deep, not at all punctured.

Length 12–13 mm. Width 4–5 mm.

The single type specimen of this interesting and valid variety is deformed and in bad condition. It comes from the Adiron-

dack Mts., New York. We have before us four specimens from Stowe, June 23–July 2 (Engelhardt), Vermont, and two specimens from New Hampshire, one from Claremont, May 2, also taken by Mr. George P. Engelhardt.

*Vapida* so far has been taken only in New England and northern New York, but later may be discovered in most of the more northern states and in southeastern Canada.

#### *E. lachrymosa* (Newn.).

Elongate-oval. Black dull, not shining. Thorax quadrate, rather sharply narrowed behind; a little wider (4.5 mm.) than long (4 mm.), surface smooth, shining, side margins reflexed; basal impression linear, deep, impunctate or with a few scattered punctures; hind angles obtuse, with a low flat and inconspicuous carina or not carinate at all; with a single distinct seta. Head smooth, averaging smaller than *stygica* with usual longitudinal sulcus on each side of middle; clypeus with a seta on each side, front emarginate; labrum truncate, front with long, coarse, brownish hairs. Elytral striae very deep, not punctured; intervals convex and very minutely punctured. Femora black; tibiae and tarsi usually black except last three tarsal joints but sometimes entirely a dark chestnut brown. Underside black. Metasternal and prosternal episternum, and first three ventral segments distinctly punctured, prosternum, middle of first three ventral segments and last three not or very finely punctured.

Length 13–15 mm. Width 4.5–6 mm.

Reported from Maine south through the mountains of North Carolina and Tennessee and westward to Cincinnati, Ohio (Dury). Very local but abundant where found. *Lachrymosa* seems to prefer the mountainous regions at elevations of from 2/4000 feet. The senior author has taken it plentifully in the Blue Ridge Mts. of Virginia, Smoky and Unaka Mts. of North Carolina and Tennessee. Apparently rarer in Maine and New England. During some twenty years of collecting along the Potomac River (Fairfax County, Va.) by the senior author one specimen was found (September). Undoubtedly this specimen was washed down from the mountains but it is also possible that *lachrymosa* is not quite so rare in this region. The impossibility

of separating this species in the field from *stygica* which, because of the before-mentioned abundance, collectors soon tire of picking up may have a bearing on so few specimens being saved from accessible and often collected localities.

*Lachrymosa* is easily separated from all other species by characters mentioned in this description.

**E. washingtonensis** nov. sp.

Short, rather broadly oval to elongate-oval in certain male specimens. Black, shining. Thorax much wider towards apex than at base, rather sharply narrowed from just before the middle; about as wide as long to slightly wider (4-4 mm.) to (4.5-4 mm.); surface shining, smooth, except for the shallow, indistinct, transverse wavy lines found on almost all specimens of this genus and seen only when held obliquely to the light, side margins reflexed; basal impression coarsely, densely punctured and rugous, without tubercle; base of thorax rather sparsely punctured, much less so to not at all at center where occasionally there are short longitudinal sulca; hind angles obtuse, with the usual single seta, carinate, carinæ rather long and distinct turning in away from thoracic margins.

Head smooth, shining; rather large but slightly narrower than thorax; with the usual distinct, deep, longitudinal sulcus on each side of middle commencing at the clypeal suture and extending as far back as the front of the eyes which are conspicuous; clypeus with a seta on each side, front slightly emarginate; labrum truncate, front with long, coarse brownish hairs; mandibles black, conspicuous; palpi reddish brown; antennæ piceous to dark brown, first three joints smooth and somewhat darker, remainder pubescent. Elytral striæ deep, not punctured; intervals convex; next to last stria with row of large conspicuous setæ; tips of elytra rounded. Femora black, tibiæ and tarsi piceous to dark reddish brown. Underside black. Metasternal and prosternal episternum distinctly punctured, the latter usually much less so; first three ventral segments rather sparsely but distinctly punctured, last three not or extremely faintly so.

Length 12.5-14 mm. Width 4.5-5 mm.

Described from a series of three males and six females all from New Hampshire.

Holotype ♂ and allotype ♀ taken by the senior author on the slopes of Mt. Madison, July 15-20, and in the Nicolay Collection. Two paratypes ♀ one from Mt. Madison taken by the senior author and one from Mt. Washington, August, taken by P. J. Darlington, in the Nicolay Collection. Two paratypes (♂ and ♀) from Mt. Washington (Darlington) in the collection of the Museum of Comparative Zoology, Cambridge, Mass. One para-

type ♀ from Mt. Washington (Darlington) in the United States National Museum. Remaining paratypes, one ♂ from Mt. Washington and one ♀ from Mt. Kinsman taken by and in the collection of Mr. Phillip J. Darlington.

This species has long been spotted by collectors, in the White Mountains of New Hampshire, as distinct. However in view of the existing doubt as to the true standing of the recently described species of Colonel Casey and the general confusion of names in the genus *Euferonia*, up to now *washingtonensis* was either lumped with *coracina* or a Casey species or set aside in a corner of the box without a label. Although so far met with only in New Hampshire especially in the Presidential Range, it will undoubtedly turn up elsewhere in New England and probably the Adirondack Mts. of New York.

Found at the base and sides of the mountains up to about 3,000 feet elevation it may be recorded as neither very common nor very rare. July through August.

var. **rufitarsis** nov. var.

Very similar to last. Slightly larger, more elongate and convex. Basal impressions of thorax and interval not or very faintly and sparsely punctured; averaging much less so than in *washingtonensis*. Tarsi lighter in color and more reddish; tibiae darker but also less so than in *washingtonensis*.

Described from a pair kindly presented to me by Mr. Charles Schaeffer.

Holotype ♂ and allotype ♀ from Black Mountain, September 13, North Carolina and in the Nicolay Collection.

In view of the apparently very local and restricted area where *washingtonensis* is found we deemed it fitting to honor this southern mountain form with a varietal name even though some of the slight differences mentioned above may not prove entirely constant when additional material is collected.

**E. coracina** (Newn.) [*mærens* (Newn.), *adjuncta* (Lec.), *venator* Casey, *lacustris* Casey].

Elongate-oval, somewhat narrower and averaging longer than *stygica* (the species with which it is most often confused). Black shining. Thorax quadrate, somewhat narrowed behind; about as wide as long (5 mm.), surface smooth, shining, side margins

reflexed; basal impression broad, deep and rugosely punctured, without tubercle; hind angles obtuse, carinate, with a single distinct seta; carinæ rather variable ranging from a distinct convex ridge usually bent in away from thoracic margins and extending about a fifth of the length of the thorax to a rather short and less convex article often paralleling thoracic margin. Head smooth, larger than in *stygica*; eyes conspicuous. Elytral striae very deep, not punctured; intervals smooth, rather convex (at least more so than in *stygica*). Femora black; tibiæ piceous; tarsi dark chestnut brown. Underside black. Metasternal and prosternal episternum and first three ventral segments coarsely and distinctly punctured, prosternum and last three ventral segments not or very faintly punctured.

Length 15–18 mm. Width 5–6.5 mm.

Hardly less common than *stygica* and next to it our most abundant and generally distributed species. More northern, however, in range and found more often in the hills and mountains while *stygica* seems to prefer the lowlands. Ranges throughout the eastern United States and Canada from Lake Superior and Newfoundland, July (Engelhardt), to the mountains of Virginia and westward to Indiana. The specimens from the Blue Ridge Mountains (Skyland, Va.) have the tendency to approach the next variety *roanica* but should be placed with *coracina* because of the distinctly wider and larger head and thorax. *Coracina* is abundant among the hills of northern New Jersey especially around Greenwood Lake. Found under stones and logs during the summer and early autumn months.

After examining the type and original description we are convinced that *adjuncta* LeConte and *coracina* are one and the same species. *Adjuncta* was described because "the carina of the thorax narrows the lateral margin posteriorly instead of being parallel with it as in *coracina*;" also the carina is "less elevated." As might be expected in large series these characters are variable and consequently cannot be retained.

var. *roanica* Casey (*strigosula* Casey).

Differs from *coracina* "in its much narrower form, narrower, deeper and more elongate thoracic foveæ and deeper subapical sinus of the elytra."

The thorax averages longer and less quadrate. Elytral striæ even deeper than *coracina* with intervals more convex. Eyes slightly smaller. Carinæ of thorax usually more distinct; longer, straighter and more convex.

Length 14–17 mm. Width 5–6 mm.

Casey's type is from Roan Mountain, North Carolina. The senior author has collected this geographical variety in the Unaka and Smoky Mountains (Elkmont, Mt. Leconte) of Tennessee during August and through early October. Common at elevations of 2,500 to 4,000 feet.

Despite Colonel Casey's assertion that *strigosula* "may be placed near *umbonata*" this cannot be. *Umbonata* has the distinct tubercle in the basal impression of the thorax which associates it immediately with *stygica* while *strigosula*, lacking it, falls in the *coracina* group. We regard it as a synonym of *roanica* and as extending this variety's range northward to Hagerstown, Maryland. We would also place specimens from Kentucky in the Horn Collection in Philadelphia under *roanica*. Material from Kentucky and Maryland would naturally be very close to and have characteristics of the true *coracina* taken in the Blue Ridge Mountains of Virginia and would not be as typically different as those from North Carolina and Tennessee which approach the next species *relicta* somewhat.

var. **erebea** (Casey) (*ludibunda* Casey).

Differs from *coracina* as follows, "much smaller, narrower form, more flattened upper surface, more broadly rounded thoracic angles and shorter, though strongly developed carina." *Erebea* is shorter, proportionately broader and generally a smaller beetle than either *coracina* or its other variety *roanica*.

Length 14–15 mm. Width 4.8–5.5 mm.

Described from Bayfield, Wisconsin (Wickham). This variety replaces *coracina* in some parts of New England. The senior author found it common at Greenville, Maine, during August. One specimen from Norfolk, Conn., May 5.

After examining Casey's type we can find no apparent differences between *ludibunda* and *erebea*. *Ludibunda* was described from Buena Vista Spring, Franklin Co., Pa.

*Erebea* might be confused more readily, by some, with *washingtonensis* rather than with its stem species *coracina*. It may be told at a glance from *washingtonensis* by the elytra not being distinctly rounded behind the middle and not so narrowed towards the base and also by its longer and more oblong form. It also apparently does not occur in the same localities as *washingtonensis*.

**E. relictæ** (Newn.) [*protensa* (Lec.)].

Elongate; longer and narrower than either *stygica*, *lachrymosa* or *coracina*. Black, shining. Thorax longer and more distinctly narrowed behind than in any of the preceding species, surface smooth, shining, side margins reflexed; basal impression deeper and more of a channel than in *coracina*, rugosely punctured, without tubercle; hind angles obtuse, not carinate but with a small more or less distinct tubercle instead, on which there is a distinct seta. Head smooth, large; eyes conspicuous. Elytral striæ very deep, not punctured, intervals smooth, very convex. Femora black; tibiæ piceous. tarsi dark chestnut brown. Under-side black; punctuation as in *coracina*.

Length 16–20 mm. Width 5.5–6 mm.

Apparently a very local and rather uncommon species *relictæ* is reported from Indiana as occurring beneath stones in deep ravines, May 25 through September 18 (Blatchley). Other localities are Lake Superior, New York, Canada, Pennsylvania, and North Carolina (Horn and Nicolay Collections), Black Mountains, N. C. (Schaeffer Collection).

The specimen marked *relictæ* in Casey's collection from Louisiana is *stygica*. *Relictæ* most closely resembles *coracina* variety *roanica* but can be easily separated by the absence of carinæ on the thorax and by its longer and more distinctly narrowed thorax behind and generally longer and more narrowed form.

**E. flebilis** (LeConte).

Somewhat resembles preceding but much smaller. Thorax more subparallel, not distinctly narrowed behind. Thorax with tubercle at hind angles as in *relictæ*. The senior author examined the type some years ago and we are indebted to Mr. Philip Darlington for obliging with the following note: "The type

of *E. flebilis* measures 14.5 mm. from tip of head to apex of elytra. LeConte has a second specimen set beside the type but from a different source (it has a pink label, indicating Middle States). Both are placed at the end of LeConte's series of *coracina*."

*Flebilis* was described from a single specimen taken from Lake Superior and while it appears as an abundantly valid species, until more material is collected, it is hard to say whether or not the unique is after all only a "sport." Colonel Casey's *flebilis* is *coracina*.

\***Melanius** Bon. (*Omasus* Steph.)

Thoracic foveæ duplex. Head well developed with prominent eyes and slender palpi. Thorax more or less constricted at base, except in *luctuosus*. Each elytron with three dorsal punctures.

KEY TO SPECIES

- Basal thoracic impressions coarsely, densely punctulate, space between usually punctulate, but punctures less dense; elytra not iridescent, striæ deep .....(1).  
 Basal thoracic impressions not or very sparsely punctured; elytra more or less iridescent, striæ fine.....*ebeninus*.  
 (1) Thorax moderately narrowed behind, angles small, rectangular, but slightly prominent.....(2).  
     Thorax sharply narrowed behind, cordate; angles rectangular and prominent .....*caudicalis*.  
 (2) Form slender, length 9-12 mm.....*luctuosus*.  
     More slender and smaller 7-8 mm.....var. *tenuis*.  
     Form much broader, slightly more convex; length 13-15 mm.....*corvinus*.

**M. ebeninus** (Dej.) [*acutangulus* (Chd.)]

Elongate-oblong. Black shining with elytra more or less iridescent. Thorax widest at apex, sides rounded, sinuate near hind angles. Striæ of elytra finer and more shallow than in other species of the genus, very finely punctured; intervals flat. Length 14-16 mm.

\* Replaces *Omasus* of Leng list. The species of this genus with the exception of one introduced form *vulgaris* L. now established in Washington and Oregon (Hatch, Pan-Pacific Ent., Vol. IX, No. 3, 1933, pp. 117-121) are indigenous to Europe. According to Hatch, *Omasus* may be told from *Melanius* by one or two setæ on either margin of the ventral surface of the last tarsal segment.



This is the rarest of the four species found around New York. It has been taken on Long Island by Mr. Engelhardt. There are a few scattered records from New York State which is probably its northern limit. We question the authenticity of some from the northern part of the State. Taken occasionally in New Jersey generally along the sea-coast and ranging southward to Florida and Texas. This species is placed in the subgenus *Metamelanius* Tschitsch by Csiki in "Coleopterorum Catalogus," Pars 112, p. 632, but we prefer to leave it in *Melanius*.

**M. caudicalis** (Say) [*nigrita* (Kby.), *agrestis* (Bland), *brevibasis* (Casey)]

Elongate, much more slender than the preceding species. Black, shining. Antennæ reddish brown, femora black, tibiae and tarsi reddish to piceous. Thorax as given in key. Striæ of elytra moderately deep, finely punctured. Length 10-13 mm.

Fairly common on the New Jersey meadows at Arlington and also along the Potomac River in Virginia. Its range as shown in the Leng list is Oregon, Colorado, Lake Superior, Indiana and south to and including Maryland. Possibly the western records are incorrect and this species will be found to occur only in the east like all the other genera and species of *Pterostichini* treated in this paper. Found all year round under logs and stones.

**M. luctuosus** (Dej.) [*abjectus* (Lec.), *hamatus* (Harris), *confluens* (Casey), *testaceus* (Casey)]

Similar to *caudicalis* but smaller and more slender. Thorax as given in key; basal impressions usually but not always less coarsely and densely punctured than in *caudicalis*, space between smoother. Elytra slightly wider than thorax; striæ deep, finely punctured. Antennæ and legs as in *caudicalis*. Length 9-12 mm.

Very common wherever it occurs all year round. Especially abundant in the Arlington Meadows of New Jersey, along the Hudson River valley and throughout North Jersey. Ranges from Newfoundland and Nova Scotia south through Virginia and west to Indiana and Illinois.

Despite certain peculiarities of the thorax mentioned in the

original description we feel that *O. testaceus* is only a brown and immature *luctuosus*.

var. *tenuis* (Casey)

Merely a small and narrower variety of the preceding species with consequently more parallel elytra. Length 7–8 mm.

Occurs with *luctuosus* but much less abundant. A very doubtful form and hardly worthy of a name. Incorrectly placed in the genus *Dysidius* along with *testaceus* Casey by Csiki in "Col. Catalogus," Pars 112, p. 638.

**M. corvinus** (Dej.) [*subpunctatus* (Harris), *tenebrosus* (Chd.), *aequalis* (Casey)]

Elongate, more robust and convex than previous species. Black shining. Antennæ and tarsi piceous to black. Sides of thorax rounded, hind angles only slightly prominent; basal impressions deep, sparsely and coarsely punctured. Elytral striæ deep, not noticeably punctured. Length 13–15 mm.

Not rare but by no means as common as *luctuosus*. Ranges from Lake Superior to Virginia and Georgia. Common along the Hudson River valley around New York and also in many localities around Washington, D. C. Found all year except during winter when the ground is frozen.

**Dysidius** Chd.

Thoracic foveæ single, linear; hind angles never carinate. Head moderate in size. Elytral striæ deep, not punctate; each elytron with three dorsal punctures.

KEY TO THE SPECIES

Color purplish; basal impressions not punctured .....*purpuratus*  
 Black; basal impressions punctured. Length 11–13.5 mm. ....*mutus*  
 Length 9.5–10 mm. ....var. *egens*

**D. purpuratus** Lec. (?*parallelus* Mots., *ohionis* Csiki, *trinarius* Casey)

Elongate, rather robust. Head and thorax black, shining. Elytra with distinct purplish tinge. Antennæ and tarsi piceous; femora somewhat purplish. Elytral striæ deep, not punctured; intervals convex. Length 12–14.5 mm.

Reported from middle Atlantic States from New York where it is very rare and can hardly be considered as indigenous (one specimen from Staten Island, caught by Mr. Charles Leng many years ago), through Virginia and westward to Illinois, Indiana, and Ohio. The senior author has taken many specimens of this fine species along the banks of the Potomac River in Fairfax County, Virginia. It is found under stones and logs in deep, dark woods where the ground is rich and damp. Entirely absent in most places but fairly common in others. September is the best month to find it.

Csiki, in "Col. Catalogus," Pars 112, p. 637, regards *Dysidius* as a subgenus of *Pterostichus*. This makes the name *purpuratus* preoccupied and he consequently calls his species *ohionis*. We feel that it is better to break up (when possible) such a large genus as *Pterostichus* and in considering *Dysidius* as valid the name *purpuratus* of course is retained.

**D. mutus** (Say) [*carbonarius* (Dej.), *morosus* (Dej.), *picicornis* (Kby.), *pulvinatus* Hausen, *stenops* Hausen]

Elongate, usually but not always more slender than *purpuratus*; subdepressed. Black, shining. Antennæ and legs piceous. Thorax smaller and less rounded than preceding species. Elytral striæ deep, faintly punctured, intervals subconvex.

One of the most common of our *Carabidæ*. Occurs throughout the northeastern part of the United States. Found all year round but most common in the spring and autumn.

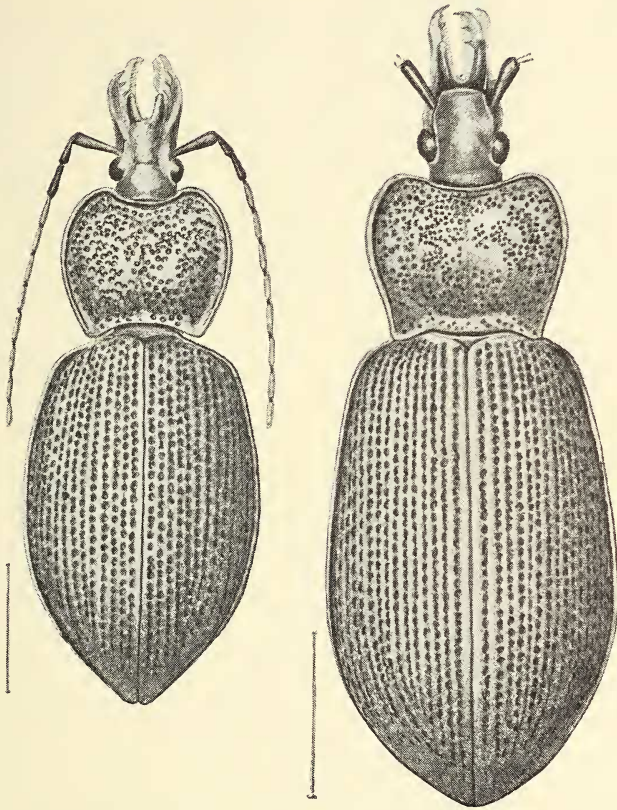
var. **egens** Casey.

An all around diminutive form of *mutus*. Occurs with it but much less abundant. Described from New Jersey. Specimens taken by the senior author at Hewitt and Arlington Meadows of the same state.

## PLATE XIII

*Scaphinotus snowi* Lec.

Male drawn from specimen in collection of senior author. Female drawn from specimen in the collection of the Academy of Natural Sciences of Philadelphia. Male at left; female at right.



SCAPHINOTUS SNOWI